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INTERNAL IMPROVEMENTS IN INDIANA.

No. IV—RAILROADS.

THE railroad in Indiana and the part it has played in the development of the commonwealth might well afford material for a volume. Here we can not pretend to more than a brief outline sketch, but in that sketch we shall attempt to touch upon the various phases of development in their due relations and make obvious the vast importance of this factor in transportation.

MOVEMENTS PRELIMINARY TO THE RAILROAD ERA.

The steam railroad in the United States, in its first crude, experimental status, was about five years old when the spreading interest becomes traceable in Indiana. The startling proposition that the ancient difficulties of transportation by land could be vastly lightened by a mechanical force, born of simple fire and water, that should convey great loads at an unheard-of speed, did not convince the conservatives as to its practicability, and it required something like courage to exploit it. One of our first men publicly to advocate it was Governor James B. Ray, who, along with his many curious aberrations, seems to have been gifted with real insight and vision. As early as 1827 he advanced an argument for railways as against canals, and even advocated a line from Lawrenceburgh up the White-water valley to connect with the National Road. In his legislative message of 1830 he suggested the union of the lakes with the Ohio river by the grand scheme of a railroad from Detroit river across Michigan to Lake Michigan, thence, by way of Indianapolis, to the Ohio; and he further pointed out that the terminus at Louisville of the Lexington & Ohio railroad, which was then proposed, would seem to mark out that point as the proper southern terminus of an Indiana road. In this he re-

vealed a sagacity decidedly in advance of that of the Indiana legislature which, six years later, established such terminus at Madison. The falls of the Ohio, with its three cities of Jeffersonville, New Albany and the Kentucky metropolis, and not the city of Madison, was undoubtedly the logical stopping-place for our first road, as is proved by the fact that the Madison road was ultimately swallowed up by the line between Jeffersonville and Indianapolis. Governor Ray's opulence of imagination led him into schemes and predictions that in his day passed for the rankest whimsicality. According to one of his biographers, he dreamed of a "grand scheme of railroad concentration at Indianapolis. Here was to be the head of a score of radiating lines. At intervals of five miles were to be villages, of ten miles towns and of twenty miles respectable cities." Subsequent history shows that the vagaries of a "crazy" man sometimes outrun the wisdom of his generation.

By 1831 the railroad idea was beginning to ferment. Ray in his message of that year speaks of lines that "are contemplated from Cincinnati and from Louisville to Indianapolis," and a legislative report from a committee on canals and internal improvements discusses the practicability of railroads as compared with canals. Public interest was promoted at this period, doubtless, by the exhibitions of a Kentucky genius, one Joseph Bruen, who traveled about with a miniature locomotive and coach and a portable track with which he demonstrated to the curious the wonderful possibilities of the steam engine by drawing his little coach full of people around his runway. This was the first locomotive to turn wheels in Indiana.

In 1832, for some reason not quite clear, there was a sudden, not to say spasmodic, impulse toward this form of internal improvement, as is indicated by the fact that this year eight different railroads were chartered by the Indiana legislature. This preliminary craze grew. In such history as we have upon the subject it is customarily represented that the construction of the Madison & Indianapolis road under the State's aid marks the very beginning of our railroad era; but it is an interesting though now quite forgotten fact, that before the State essayed that task at all the legislature was deluged with applications and something like thirty charters were granted to would-be

railroad corporations. These corporations were composed of the enterprising and public-spirited citizens of many communities all over the State, and the roads, had they all materialized, would have pretty well provided the various sections of the State with transportation routes. Even at that day the future importance of the capital as a railway town was, in a sense, foreshadowed, as eight of the proposed roads were to connect with Indianapolis. These incipient ventures may be mentioned more specifically. The first six charters were granted simultaneously by an act of February 2, 1832, and these were the Lawrenceburgh & Indianapolis; the Madison, Indianapolis & Lafayette; the Ohio & Lafayette (from falls of the Ohio via Salem to Lafayette); the Wabash & Michigan (from Lafayette to the site of Michigan City); the Harrison & Indianapolis (via Brookville and Rushville), and the New Albany, Salem, Indianapolis & Wabash. Immediately on the heels of these came the Richmond, Eaton & Miami and the Ohio & Indianapolis (Jeffersonville to Indianapolis via Columbus). The legislature following seems to have done nothing in this line, but that of 1833-'34 chartered the Evansville & Lafayette (to follow the Wabash valley); the Indianapolis & Lafayette (via Crawfordsville); the Leavenworth & Bloomington; the Indiana Northwest Railroad Company (from Michigan City to the National Road on the west side of the Wabash at Terre Haute), and a short road connecting New Albany and Jeffersonville. In 1835 Charlestown thought to relieve the handicap of its inland situation by a little steam road to the Ohio river, and the list was further swelled by the Buffalo & Mississippi (to cross the northern part of the State); the Indianapolis & Montezuma, and the Michigan City & Kankakee (to connect Lake Michigan with the navigable waters of the Kankakee). A year later followed the Crawfordsville, Covington & Illinois; the Princeton & Wabash; the Perrysville & Danville (Ill.); the Lafayette & Danville; the Bethlehem & Rockford (from Bethlehem, in Clark county, to Rockford, in Jackson county); the Jeffersonville & Vernon, and the Madison & Brownstown. In 1837 came the Michigan City & St. Joseph (Mich.); the Indianapolis & Michigan City; the Hudson (Laporte county) & New Buffalo (Mich.); the Ft. Wayne & Piqua (O.), and the Mount Carmel & New Albany.

These incorporations, extending over a period of five years, mark the railroad movement preliminary to any real construction. While the number of them and corresponding number of promoters drawn into the ventures would seem to indicate a strong tide of sentiment in favor of this innovation in transportation, there are further indications that capital generally and public confidence were slow to respond. With all the rush for charters little was done beyond an occasional sporadic stirring of the question by some local paper and, perhaps, an uncertain amount of surveying. The "little" referred to was to the credit of the Lawrenceburgh & Indianapolis company, which, as appears by the records, was the most energetic of the various companies and which, in 1834, actually got down to work. To this company belongs the honor of introducing the railroad in Indiana. The Madison & Indianapolis line is credited with the distinction of being the pioneer road, but as a matter of fact, before the Madison road was taken up by the State, and while the old Madison company was practically sacrificing its charter, the L. & I. company was surveying, constructing and establishing data for future roads. The construction was on an experimental strip of road, one and one-fourth miles in length, in the neighborhood of Shelbyville. The first railroad report in the State was, we believe, the one transmitted to the legislature by this company under date of December 5, 1834. It is a document of some interest. The implication is that the locality at Shelbyville was chosen because the cuts, embankments and other problems for the engineer at that point represented a fair average for experimental data. There was "one cut of five feet, one embankment of five feet and of one of ten, two curves and two bridges." The cost was \$1500 per mile. Of course there was no locomotive for the road, and in lieu thereof a horse-car was built and the great advantages of a track in facilitating traction was effectively demonstrated, if we can believe the statement that "one horse was found able to draw forty to fifty persons at the rate of nineteen miles per hour." This road was "opened" on the Fourth of July, 1834, at an expense of \$222.12½ for the car and \$12.62 for horses and drivers, \$60 of which was returned to the promoters in fares from those who treated themselves to a ride over the new road. Local tradition says that the occasion

was additionally celebrated by an old-time barbecue. This report, which is over the signature of James Blake, "President pro tem.," argues vigorously for the advantages of railroads and presents figures that purport to show that railroad transportation as compared with rates by wagon, etc., would save in one year nearly a quarter of a million dollars to ten specified counties, the estimates being based upon current tonnage and rates. The new values that would be given to stone, timber and firewood for steam mills is also dwelt upon, as are the prospects for liberal dividends to stockholders.

These arguments but reinforced others, equally ardent, advanced two years before by John Test, then president of the L. & I., who contributed to the *Indiana Palladium*, beginning March 17, 1832, a series of articles on railroads which are among the first if not the first elaborate discussions of the subject in the Indiana press. As presented by him, the L. & I. was to be a "link in a great chain," that was to be extended from Cincinnati to St. Louis by way of Indianapolis.

With all the zeal and enterprise of its promoters, however, the L. & I. company was doomed to delays many and vexatious ere it accomplished its dream of a connection with Indianapolis and the interior of the State. The difficulties of financing railroads at this stage of progress was probably the fatal obstacle to all these early ventures.* Public sentiment as expressed in the confidence of capitalists was not yet ripe, but the ripening process was slowly going on. Everybody realized that better transportation facilities were an ever-pressing need, but the cost of building and maintaining railroads seemed something prodigious. The problem took the form of a choice between improved wagon roads, canals and railroads, and there was frequent discussion of the respective merits of these. The macadam turnpike, which was much considered, was, of course, by far the cheapest of these improvements in localities where the material for it was to be found, but in other localities it was prohibitive. In the discussions the respective advantages of canals and railroads seemed to be about balanced. As to first cost, the argument was, perhaps, in favor of the railroad, as railroads were

*It may be added here that the development of the State at this period could not have supported these railroads had they been built.

then constructed, but in the building of the latter the cost was far more hypothetical than that of canals, with which engineers were more familiar. The expensive machinery for locomotion and the vehicles for carriage, together with the frequent repairs on these and on the roadbed, made the cost of maintenance of the railroad formidable and problematical, but the canals, from floods and other causes, were also subject to expensive repairs. The enormous tonnage that could be moved with small and cheap motor power was vastly in favor of the canal, but off-setting this the railroad offered the no small advantage of time saved by swift conveyance. Again, canals in our northern latitude would be put wholly out of service during the more severe winter months, while railroad service, comparatively independent of weather contingencies, would be continuous. Another consideration was that railroad machinery and much of the material for construction, being imported, took money out of the country, while money expended on canals remained here; and, finally, the water-power afforded by canals as a "by-product" built up mills and other industries along their lines.

These were the arguments, in brief, that were put before capitalists and the people during that uncertain period when the transportation problem was pressing for solution and the financial and social conditions counseled conservatism and prudence. That the practically untried railroad won but slowly over the better-known canal is evidenced by the fact that when the State finally took up a system of public works there were included in it four canals and only one railroad—the famous "Madison" road.

THE MADISON & INDIANAPOLIS ROAD.*

The earlier years of the Madison & Indianapolis railroad present a phase of railroad history that is unique, at least in this State. It was one of the first roads incorporated, its charter bearing the same date as that of the Lawrenceburgh & Indianapolis. For four years, as a private corporation, it lay all but dormant, so far as actual performance was concerned. Just why the

*A history of Jefferson county now being prepared by Miss Drusilla L. Cravens, of Madison, devotes a long chapter to the Madison & Indianapolis railroad which, when published, will probably be the most thorough history of the road that has appeared in print. The sketch we here present deals with this special history only so far as it is essential to our more general subject.

State took Madison under its wing is a story lost to history now, unless it might be dug up from contemporary newspaper files. As a matter of fact the Ohio river towns, notably Lawrenceburgh, Madison, Jeffersonville and New Albany, were lively and jealous rivals in all that pertained to their prosperity from the interior, and they were probably rivals for the State railroad as they had been for the Michigan road some years before. Lawrenceburgh, from its nearer approach to Cincinnati and the markets of the East, and the cities at the falls of the Ohio, that much nearer the Southern markets, were more logical points than Madison for railroad connection with the interior. But Madison got the Michigan road and she got the railroad, and the most reasonable inference seems to be that in the strenuous legislative "log-rolling" of that day her representatives were the most expert. However that may be, the chief factor in Madison's future prosperity (as it proved) was thus introduced, and the timid people who lacked the faith to build their own railroad hailed with enthusiasm the paternal undertaking, as if the big State in its might could do with impunity what private enterprise could not.

The State took up the work on a broad-gauge plan, and at once. In 1836 the route was surveyed from Madison to Vernon, a distance of twenty-two miles, and ground was broken. The builders proceeded on the theory that the best was none too good, and instead of using the plain strap rail, then and for some years after in common use, a T rail was imported from England at an expense of \$80 per ton. In November, 1838, eight or nine miles of track having been completed, the road was formally "opened," the event being signalized by the presence of the Governor and other State officials, and distinguished citizens from far and near. A locomotive had been ordered of the Baldwin shops, at Philadelphia, and shipped via the gulf and rivers, but this was lost at sea, and in lieu of it a little engine named the "Elkhorn," owned by the Lexington & Ohio railroad, in Kentucky, was secured, brought from Louisville on a barge, hauled up the Michigan road hill by oxen, and put on the track at North Madison. An excursion was made over the new track and the affair wound up with a banquet and speeches. Railroad progress in the State being continuous from that day, this may be considered the real inauguration of the railroad age.

in Indiana. The road was opened for traffic as far as Graham creek, about eighteen miles out, in April of 1839. At that time there were two roads in the West in operation—one from Lexington, Ky., to the Ohio river at Louisville (from which the "Elkhorn" had been secured), and another from Toledo, O., to Adrian, Mich., which was opened in 1836.* The Mad River & Lake Erie, running southward from Sandusky, O., was put in operation the same year as the M. & I.

The State built twenty-eight miles of this road at the enormous cost of \$1,624,603, or something over fifty-eight thousand dollars per mile, then, the penalty for the statesmanship of 1836 being about due, it, along with the other public works, was suspended. The railroad was leased to private firms—first Branhams & Co., then Sering & Burt—who ran it for a percentage of the earnings. Then the State took hold of its business again only to find itself burdened more than ever with a "white elephant," and following that a transfer of the road was made to a private company with the argeement that the latter should take up anew the work of construction and complete it to Indianapolis. By way of aid this company was permitted to receive land in payment for shares of stock, and to issue scrip redeemable in this land. Land to the amount of 26,795 acres was subscribed, and \$96,200 in scrip issued. The work was pushed to completion, and on October 1, 1847, the first train steamed into Indianapolis in the midst of a jubilation as enthusiastic as that at Madison, in 1838, when the little "Elkhorn" was introduced to the curious public. It should be noted that the company constructed its part of the work at something less than \$11,000 per mile as against the \$58,000 of the State's expenditures. The engineering difficulties of the southern end were much greater than those further north, but by no means such as to account for the vast discrepancy.

The proprietorship of the M. & I. was now dual, the State and the company owning respectively the portions they had built, and the earnings were divided according to mileage. The story of this copartnership is one of protected monopoly and presents an interesting phase of the subject. It is dealt with at length in Miss Cravens's chapter above referred to, and need not

*Howe's Collections of Ohio, v. II, p. 412.

be dwelt upon here. Suffice to say that under it the State gained nothing, railroad construction elsewhere was unfairly retarded, and the Madison & Indianapolis Railroad Company, within a few years, waxed fat off its advantages. The relationship lasted until 1852. Then the State sold out its interests to the company at a sacrifice, withdrew its protection, and at once proceeded to the passage of a general railroad law that opened the way to those rival lines that had been previously handicapped by the denial of fair charters. The result was fatal to the M. & I. The most formidable of those rivals, the Jeffersonville and the Lawrenceburgh roads, pushed forward their work and soon intercepted the trade of the Madison, carrying it to more advantageous points on the Ohio; simultaneously, the Bellefontaine, which had been building for three or four years, made a direct connection with the East by way of Ohio roads, and soon thereafter the Indiana Central did the same. Meanwhile the M. & I. steadily declined,* finally (in 1862) was sold out by the United States marshal, and not long after became the property of the Jeffersonville road. Since then the Madison end of the line is but a branch of the main road.

OTHER EARLY RAILROADS.

After four or five years of vicissitudes the Madison & Indianapolis railroad began to justify its existence as a business venture. Between the years 1843 and 1849, according to Chamberlin's Indiana Gazetteer, its annual receipts steadily increased from \$22,110 to \$235,000, and the daily travel from 25 to 200 passengers. After its completion to Indianapolis, in 1847, its real prosperity set in and until 1852 its volume of business increased phenomenally, its financial success being indicated by the fact that in the year last mentioned its stock sold for \$1.60.† This practical object lesson had its effect as a stimulus, and the "railroad fever" of the early fifties is a well-known chapter of

*The report of President E. W. H. Ellis for 1854 (see Documentary Journal for that year) as a piece of *naïve* literature is unique among official reports. The burden of the president's wail is that the State, in passing a law which "opened the door for the construction of other railroads," was instrumental in inflicting serious damage on the M. & I., through competition that at once sprang up. The long-protected M. & I. seemed to regard this as a breach of faith on the part of its erstwhile protector.

†Holloway's Indianapolis.

our railroad history. Pretty nearly every section of the State caught the disease and proceeded to build railroads at an astonishing rate. Prior to 1850 the only railroad in operation in Indiana was the Madison & Indianapolis. By the latter part of that year the Bellefontaine had completed 28 miles; the Jeffersonville, 16; the Knightstown & Shelbyville, 27; the Rushville & Shelbyville, 20; the New Albany & Salem, 35; and the Shelbyville branch of the M. & I., 16; making, with the original 86 miles of the M. & I., a total of 238, according to the U. S. census. Governor Wright, in his message of December 31, 1850, says: "We have 212 miles of railroad in successful operation, of which 124 were completed the past year. There are more than 1000 miles of railroad surveyed and in a state of progress. There are now," he says, "\$1,000,000 of corporate stock taken in the State, in railroads, by cities and counties, and from the present excitement in different parts of the State the amount will be largely increased the coming season."* On the maps of Indiana for 1852 and 1853 we find almost a score of roads traversing the country in all directions, most of them being then in operation. These are the Madison & Indianapolis, the Terre Haute & Indianapolis, the Lafayette & Indianapolis, the Peru & Indianapolis, the Indianapolis & Bellefontaine, the Indiana Central, the Indianapolis, Lawrenceburgh & Cincinnati, and the Jeffersonville, all directly tributary to Indianapolis. Others are the New Albany & Salem, traversing the length of the State, from New Albany to Michigan City; the Northern Indiana (Michigan Southern); the Cincinnati & Lawrenceburgh (Ohio & Mississippi), to Vernon; the Junction (C., H. & D.) from eastern State line to Rushville, and the Richmond & New Castle, from Richmond to Anderson, with continuous connections to Kokomo, Logansport and the New Albany & Salem road at a point in Stark county. Other roads and branches, the names of which are not given, are from Evansville to Vincennes, Martinsville to Franklin, Edinburg to Shelbyville and Rushville, Michigan City to Chicago, and Peru to Elkhart.†

*With a distrust born of the State's past experience, the Governor deprecates this dabbling in stocks with public funds, and maintains that railroads should be entirely private enterprises.

†Few, if any, of these roads now retain their original names.

BEGINNINGS OF A SYSTEM.

It may be noted that the combined mileage of these roads and the areas they served were much in excess of that contemplated in the famous internal improvement system which the State had hoped to establish fifteen years before. An examination of the routes shows that not only were the various sections and principal cities of the State put into communication with each other, but systems of trunk lines were beginning to be knit that reached out to remoter points and to the great markets that were so necessary to the State's prosperity. The Terre Haute, Cincinnati, Indiana Central and Bellefontaine roads, connecting with roads in other States, were or were soon to become links in continuous lines binding the Mississippi river to the Atlantic seaboard; the New Albany & Salem connected the Ohio river and the great lakes, while the Madison, Jeffersonville and Peru roads, with extensions northward soon to follow, did the same. Two other lines built a little later, one being completed in 1856 and the other in 1857, were the Pittsburgh, Ft. Wayne & Chicago and the Toledo, Wabash & Western, which were important additions to the new transportation system. The latter, having its eastern terminus at Lake Erie, threaded the Wabash valley to Williamsport, in Warren county, thence passed to the Mississippi river. In its route through this State it paralleled the Wabash & Erie canal, and demonstrated directly and strikingly the relative values of the two great methods of transportation. The railroad ruined the canal. After the year 1856 the rents and tolls from the latter fell steadily off till, from \$113,423.47 in the last-named year the returns in 1874 were but \$7,179.61. Back of this, of course, lay the decreasing traffic by boat. Not only passenger travel but the greater part of the imports and much of the export trade was shifted to the more expeditious mode of conveyance, and only the bulkier goods, such as grain and lumber, which were the least profitable, were left to the canal boats. As this kind of tonnage was mostly exports, the boats that carried it out frequently had to return empty—a condition that was fatal to profits and the life of the canal trade. In a word, the canal, as opposed to the railroad, was a failure, and was passing into desuetude.

INFLUENCES OF THE RAILROAD.

The influence of the railroad throughout the State was marked, not to say phenomenal. A striking illustration of it was afforded by the rise and decline of Madison. Between 1840 and 1850 the population of this city increased from 3798 to 7000. In the early fifties, in point of commerce, wealth, culture and general status, she was easily the leading city of Indiana, and the chief factor in creating such preeminence was the old Madison railroad draining down to that point, as it did for a dozen years, all the trade of the interior. For one thing, it became a pork market, second only to Cincinnati, the "Porkopolis" of the West. Practically all the travel into the interior from the East and South was by way of Madison and her railway, and she became known as the "gateway to the State." The decline of her road after 1852, by the deflection of trade to other roads, marks the beginning of her decline, and, outstripped as she has been by other towns of the State, she now stands in history as an object lesson, proving how the railroads can make and unmake cities. Richmond, between 1850 and 1860, gained over 5000 in population, advancing, meanwhile, to a manufacturing city of quite respectable proportions. A like stimulus can be traced in Ft. Wayne, Lafayette, Terre Haute and other towns that were on important lines. Not the least notable of the many effects was the rearrangement, so to speak, of the centers of population. Under the old order, navigable waters, good mill seats and topographical considerations were important factors in determining settlements, but now the centers that sprang up were strung along the new overland routes of travel and many of the river towns that had aspired to ascendancy were left to dwindle in isolation. As, in the first instance, the leading towns already in existence determined the location of the railroad routes, so to a greater degree did these routes determine the location and multiply the number of the smaller towns. The early roads, when surveyed, passed through comparatively few towns other than county seats, yet Governor Ray's dream of a town or village every five miles has long since been practically fulfilled. Along with the growth of urban populations and transportation advantages went an industrial development, and from a purely agri-

cultural State Indiana began to make a showing in the manufactures,* and her natural resources, many of which had lain in primeval uselessness because of the transportation difficulties, now began to engage the attention of capitalists. Real estate took on new values. The advantages to the State generally were set forth by the president of the M. & I. road at the time Indiana was trying to get out of the entanglement with her railroad. Even if she had paid enormously for her road and had sold out for a pittance, it was plausibly argued, the vast enhancement in property values and the corresponding returns from taxation, due directly to this railroad, far outweighed the seeming loss.† This was doubtless true, and it indicates, in part, the immeasurable effect upon the commonwealth of the railroads collectively.

THE RAILROADS AND INDIANAPOLIS.

But the most notable, perhaps, of the stimulating effects of the railroads within the State was the part they played in the development of Indianapolis. From the first charters of the early thirties, as has been shown, the capital, located as it was, was recognized as a logical railroad center, and among those

*A reference to statistics shows the effect of the railroads upon manufactures. The Indiana Gazetteer for 1850 gives the manufactured products of the year as aggregating in value \$19,199,681, while these values for the next ten years, according to the census of 1860, averaged \$41,840,434, with a total of 20,755 hands employed in manufacturing industries. Taken by counties, those that show the heavy investments are, almost without exception, those that have the railroad advantages. Jefferson and Wayne lead all the others, the former with \$1,117,699 of invested capital.

The important relation of the railroad to commercial prosperity is illustrated by what was known as the "Erie war" which occurred in 1853. At that time the railroads had not established a uniform guage (width between the rails), and a break of guage at Erie, Pa., which was in the line of travel between the East and the West, necessitated not only a transfer of all through passengers at that point, but of all freight traffic as well. The profit in this to the town of Erie and the corresponding inconvenience and expense to travelers and shippers resulted in serious friction. Erie seemed to think that her transferring industry was a vested right, and that the rest of the world could go hang, and when an attempt was made to unify the guage her citizens forcibly interfered with the laying of rails in the streets. The wrath in the West at Erie's hoggishness and the execrations heaped upon the town by the press and in indignation meetings were loud and universal. The *Indianapolis Journal* for December 17, 24, 25 and 28, 1853, gives glimpses of the public feeling.

†In justly estimating what seems the State's signal failure at railroad building, the above results should be considered, and also the fact that, but for its taking up the task, railroad construction in the State would probably have been delayed several years. The lack of public confidence and the difficulties of capitalizing were amply proved in the thirties. An actual experiment—an object lesson—was needed to establish faith. This the State supplied, and the result was the impulse of the fifties.

built in the early fifties not less than eight focussed there. In the history of the place a distinct period begins with 1847, when the M. & I. road established a connection with the Ohio river. From that date it proceeded to evolve from the status of an ordinary country town to that of a city with multiplied and growing activities. The particulars of this transition was graphically set forth by the author of "Holloway's Indianapolis." The business of the town, he says, was purely local. "It produced little and it distributed little. A small amount of 'jobbing' was done in an irregular way among the small dealers and manufacturers of the neighboring towns, but it was neither large enough or certain enough to be considered a branch of trade. The manufacturing, except for home demand, was even more trifling than the mercantile business. Occasional attempts had been made at iron, wool, oil, tobacco, hemp, and even ginseng manufacture, but none of them amounted to much or lasted long." With the opening of the Madison road, "there was a change of features, of form, a suggestion of manhood, a trace of the beard and voice of virility. Manufactures appeared; 'stores' that had formerly mixed up dry goods, groceries, grain, hardware, earthenware and even books in their stock, began to select and confine themselves to one or two classes of their former assortment. * * * Business showed its growth in its divisions; the price of property advanced; a city form of government was adopted; a school system was inaugurated. Everybody felt the impulse, without exactly feeling its direction, of prosperity. * * * New hotels, manufactories and business houses also appeared. The Bates House and Sherman House were built; Osgood & Smith's peg and last factory, Geisendorff's woollen mill, Drew's carriage establishment, Shellenbarger's planing-mill and Macy's pork-house swelled our industries, and various blocks, schoolhouses, railroad shops and other buildings were added to our improvements." A glance at the local press of the fifties confirms this description of prosperity and bustle. Three-fourths of the space, seemingly, was taken up by advertisements; the columns were dotted with little cuts of engines and cars, with accompanying time-tables; pictures of trains were incorporated in the newspaper heads, and a

semi-literary weekly, the first of its kind in the city, saw fit to take the name *The Locomotive*.

This sudden quickening proved to be no passing phase, for before two decades of the railroad era had passed Indianapolis, the railroad center, had become the chief city of the State, "hopelessly ahead of all rivalry, the seat of the most numerous, varied and productive manufactories, and the distributing center of a trade probably unequaled by any city in the Union of the same population." The continuation of this process of growth, the establishment of a still wider circle of connections and the addition of the interurban transportation system with the wonderful changes it is now effecting is a matter of common knowledge which passes chronologically beyond the scope of this study.

THE UNION DEPOT.

With the first centering of railroads at Indianapolis the desirability of a plan whereby, for the convenience of through passenger traffic, these roads could be made continuous in their connections, presented itself, and an account of the inception and development of this plan, which seems to have been original with the parties mentioned, is thus given by Mr. W. N. Jackson in the *Indianapolis Journal* for July 29, 1900:

"Chauncy Rose, of the Terre Haute & Richmond; John Brough, of the Madison & Indianapolis, and Oliver H. Smith, of the Bellefontaine line, met in their office in the middle of the Circle in 1850, and planned and carried into execution soon after, a Union Station at Indianapolis, and erected the first one that was ever built. For this a union track was needed from the middle of Tennessee street northeasterly to the middle of Washington street at Noble street, and the right of way for which was taken by the Terre Haute & Richmond to Pennsylvania street, and from there onward northeasterly to the center of Washington street by the Bellefontaine and Peru roads. A few miles of each road had been made previous to this. The right of way from the Madison & Indianapolis depot on South street to Meridian street was given by Austin W. Morris. The right of way from Pennsylvania street to New Jersey street was purchased from Mrs. McCarty. The Union Station was opened Septem-

ber 20, 1853, the building being finished at that period. Mr. Chauncy Rose was president of the company and Mr. W. N. Jackson, secretary, treasurer and ticket agent.

"The Lawrenceburgh & Upper Mississippi railroad entered this station in the spring of 1854 as the Indianapolis & Cincinnati Railroad Company; the Indiana Central at the same time and the Lafayette a little later, followed by the Indianapolis & Vincennes, the Indianapolis, Bloomington & Western, the Indianapolis, Decatur & Springfield, the Cincinnati, Hamilton & Indianapolis, and the Monon branch of the Louisville, New Albany & Chicago roads."

The Union Company owned all the tracks in the city and the Union Depot independently of the various roads as such. The old building, which was planned by General T. A. Morris, was originally 420 feet long by 120 wide, but afterward (in 1866) was made 200 feet wide. It was replaced by the present building in 1887-'08.

THE BELT RAILROAD.

The centering of twelve or thirteen railroads at Indianapolis caused, by the seventh decade, a congestion of traffic at that point that embarrassed the city and called for a remedy. The remedy developed in the shape of a separate road located beyond the outskirts of the city and that encircled it sufficiently to connect with all the lines that entered, and by this "Belt Road," as it was called, freight was and is transferred from one road to another without entering the city. The idea is said to have been a new one and the Indianapolis Belt Road the first one of the kind ever built. The real originator and earliest promoter of the plan has received very little credit for the part he played as the "first cause" of this important work. The written history of it begins with the organization of the company in 1873, but at least three years before that time the scheme was fermenting in the mind of Joel F. Richardson, a practical railroad man, who for more than fifteen years had been identified with construction in Indiana. This is revealed by diaries and other documents left by Mr. Richardson, and now in possession of his daughters in Irvington, Indianapolis. One statement of Mr. Richardson's as written down by his daughter at the time it was made is as follows:

"Coming up from Cincinnati one day in 1870, there was a car off the track at Walter's mill. While waiting there I had a talk with John H. Lozier about the Fletcher property in Indianapolis, he being one of the trustees. He said that as the property was in the south part of the city it would not amount to much on account of having to cross the railroads to get to or from it. I took from my pocket my drawing of the Circle Railroad and explained its necessity and my idea about it. Mr. Lozier was favorably impressed with it, and I asked him to write a piece about it for the paper to place it before the public."

Reverting back to that period the Misses Richardson remember as children this, to them, mysterious drawing of the "Circle" road and the explanations of the same as made by their father. Mr. Lozier, the daughters think, published an article in one of the Indianapolis papers about 1871 or 1872. The matter then seems to have rested until 1873, when it was taken up anew and briskly pushed. In one of the diaries above referred to the first entry is:

"*Friday, Jan. 10, 1873.* Stayed at the Mason House over night. Called on Col. Farquhar and showed him my plan for a railroad around the city."

On subsequent dates, as shown by the diary, he was busy presenting his plan to other capitalists and railroad men, from one of whom, Dillard Ricketts, he received especial encouragement. Ricketts told him to "go on and work the matter up and he would furnish money for the enterprise." Other entries show that in February he walked over the ground bordering the city, prospecting for a route. By August a company was formed and incorporated, and from that date Richardson's dream began to materialize.

The following sketch of the road was written by Charles Test Dalton as a contribution to the "Indiana Centennial Association" which celebrated July 4, 1900, by a historical meeting at the State House.* It was published in the *Indianapolis Journal*

*This "Centennial Association," which has been mentioned before in this magazine, never held any meetings other than the one here referred to. A number of valuable historical papers were prepared for the occasion by competent persons. These were local in their character, and most or all of them were subsequently published in the *Journal*. The meeting was under the auspices of the Indiana Historical Society, but its chief if not sole promoter was Gen. John Coburn, who urgently solicited the preparation of the papers.

for August 26, 1900. Mr. Dalton took the pains carefully to interview men who had been intimately connected with the Belt Railroad enterprise, and his sketch is the fullest and most reliable of which we have knowledge:

"A corporation was formed in August, 1873, of which Henry C. Lord was president, to construct a Belt road and stockyards on the present lines. On September 10, 1873, the McCarty heirs conveyed to this corporation a strip of ground one hundred feet in width, running from the Vandalia Railroad through to the river on the present line, containing more than twenty acres, as shown in deed recorded in Land Record 20, page 294, according to the conditions therein named. Articles of association incorporating the Indianapolis Belt Railway Company were filed April 9, 1873, in the office of the Secretary of State, to construct a railroad connecting the different railroads leading into the city. The then over-crowded tracks of the Union Railroad Company, over which all freight, as well as passenger cars, were brought to the city, suggested the importance of the same. The directors for the first year named therein were Addison L. Roach, Thomas D. Kingan, John H. Farquhar, Elijah B. Martindale, Joel F. Richardson, Milton M. Landis, Henry C. Lord, John Thomas and William Coughlen. H. C. Lord was elected president of the company and Joel F. Richardson, superintendent. The latter, it was said, was the first to suggest building the railroad.

"Early in September Mr. Henry C. Lord, as president of the company, proposed to Nicholas McCarty that if he and the other McCarty heirs, owners of the real estate lying between Oliver avenue and the Vincennes railroad and that between the Vincennes railroad and the river, would give the right of way through all such real estate, McCarty might select one of the three routes named by Mr. Lord on which the right of way should be located. Negotiations relative to the matter resulted in the conveyance by deed September 10, 1873, to this company of a strip of ground one hundred feet in width, running through all the said real estate on the present line of the Belt Railroad proper, containing about twenty acres, and being 8,800 feet long, as shown in deed recorded in Land Record 20, page 294, according to the conditions named therein. The company proceeded

to make the roadbed through the strip, first working on it between the Vincennes railroad and Oliver avenue. Soon afterward the panic came, all work was discontinued and was not resumed until some time thereafter, when money, it was said, was furnished by Mr. Thomas D. Kingan, and the company continued the work on the roadbed east of the Vincennes railroad. Some little time thereafter all operations were again discontinued, and, the company failing to meet the conditions of the deed, the whole strip reverted to the grantors, a decree in the Marion Superior Court, cause No. 14676, against the Indianapolis Belt Railway Company, Thomas D. Kingan and others, quieted the title in the McCarty heirs. This strip of ground is all the company ever secured for a right of way. Nothing further as to work on the embankment or any of the right of way was ever done under the direction of the Indianapolis Belt Railway Company.

"At that time Indianapolis was a city of barely over 50,000 people, a prosperous overgrown country town, of conservative people and plain dwellings, separated in a measure from the bustle of the outside world and caring nothing whether this or that city outgrew it; consequently there was little waste of nervous energy, no booms and few local strikes. This feeling of security had built up a residence city and one of solid wealth, and the fact that homes were built here by hard labor instilled in all classes a feeling of proprietorship. And this is why the great financial panic of 1873 did not reach Indianapolis until several years later, but the inevitable day dawned at last. It was a serious hour, and had to be handled in a firm manner and by a strong hand. The man arose to the occasion; he successfully averted a labor war and incidentally gave to this city a gift the value of which he could hardly hope would prove the greatest industry of this city. But the test of twenty-three years has proved his judgment. The enterprise was the Indianapolis Belt Railroad and Stockyards Company, and the man who thought out this project was the Hon. John Caven. He was mayor of the city, and endeavored to devise some plan whereby he might give labor to the unemployed and at the same time build something which would not merely be an ornament to the city, but which would bring in revenue to repay itself and

in the future increase in value. This would be accomplished in building a great belt road around the city in connection with the various railroads entering from all directions and connecting it with a large stockyard from which immense shipments could be received and sent to other parts of the country. This plan, therefore, furnished labor to the unemployed, brought a great cattle market to Indianapolis and a large amount of taxable property; and all of this was not the act of a speculator or a promoter, but of a man who cared for his city and his people so much that he would accept no stock in the concern when he could have done so justly and have acquired a fortune.

"When the details of the enterprise had been thoroughly gone over Mayor Caven drew up the Belt road message and read it before the Council on July 17, 1876. It was published in the papers, where it caused considerable comment. Articles of association of the Union Railroad and Stockyards Company, dated August 29, 1876, were filed in the Secretary of State's office. The directors for the first year named therein were J. C. Ferguson, John Thomas, W. C. Holmes, W. N. Jackson, E. F. Claypool, John F. Miller, M. A. Downing, Horace Scott and W. R. McKeen. The purpose of the same, as stated in these articles, was to 'provide convenient methods for the transportation and transfer of freight and stock cars through, into and around the city of Indianapolis, and to effect the speedy, economical exchange of cars between all the railroads entering therein, or passing through; and for the erection and maintenance of ample stockyards for the accommodation of all the live stock that may be brought into or pass through said city.' An ordinance contract was passed by the Council of Indianapolis on the petition of a majority of the citizens of Indianapolis, to be found in the volume of Indianapolis city ordinances, published in 1895, sections 1315 to 1324, both inclusive. The city of Indianapolis agreed to lend its credit to the company to the extent of \$500,000 in its bonds. After the passage of this ordinance, attorneys gave their opinion that bonds issued under the same would be invalid unless validated by an act of the Legislature, which act was passed by the Legislature, approved March 2, 1877. (See acts of 1877, page 116.) Many of our best citizens opposed the city lending its credit to the road, but a majority favored it.

The petition, signed by a majority of the citizens, was secured only after a faithful and energetic canvassing for two or three weeks of the whole city by committees from the various wards, and the validating act of the Legislature was secured after quite a struggle before the members and committees of the Legislature, by those in favor and those against the project. But it was finally passed by a large majority of both houses. Mr. Justus C. Adams, with other legislators from our county, was active in the support of the project, and perhaps more credit is due Mr. Adams than any one person in the Legislature that year for having secured the passage of the act.

"Under the ordinance contract the agreement between the Union Railroad Transfer and Stockyards Company and the city of Indianapolis (recorded in the recorder's office October 20, 1877, in Mortgage Record 305, page 514), the city agreed to lend its credit in the way of issuing the city bonds to the amount of \$500,000. The Council passed the ordinance October 16, 1876, for the issuance of the city bonds, payable in twenty years, to be dated January 1, 1877, the Belt Railroad bonds to be given to the city to secure it against the payment of the bonds so issued by the city, dated December 1, 1876. The exchange of these bonds was to be made in accordance with said agreement. The mortgage securing the bonds so executed by the railroad company to the city was recorded in Mortgage Record 97, page 34. The Belt Railroad Company having paid off the bonds so issued by the city, the mortgage executed by the Belt Railroad and Stockyards Company to the city was released July 22, 1898. By a warranty deed of June 5, 1877, the McCarty heirs conveyed to the Union Railroad, Transfer and Stockyards Company a strip of ground 100 feet in width, running through their land from a point near the Vandalia Railroad to White river, and about 105 acres for the site of the stockyards. The track was very soon laid, and the buildings of the stockyards erected and inclosed, and business began at once. Afterward the name of the Union Railway and Stockyards Company was changed to that of the Belt Railroad and Stockyards Company, and on the 17th day of October the Belt Railroad proper was leased from the Belt Railroad and Stockyards Company by the Indianapolis Union Railway Company for a term of 999 years, beginning on the 1st day of May, 1884.

"August 10, 1895, the McCarty heirs sold and conveyed to James Cunning 29½ acres adjoining the old stockyards by deed recorded in Land Record 30, page 17. Afterward, by successive conveyances, this same land was conveyed to the Farmers' and Drovers' Stockyard Company, a corporation organized under the laws of Indiana. This corporation was formed in opposition, it was supposed, to the Belt Railroad and Stockyards Company, and, after proceeding to make some little improvements, it and Kingan & Co., who were supposed to be at the back of it, effected a settlement with the Belt Railroad and Stockyards Company, and conveyed to it the above 29½ acres October 16, 1895, (recorded in Land Record 30, page 109). So the two companies were consolidated, and by the settlement Kingan & Co. leased the porkhouse belonging to the old company and made a contract with the old company to continue to do their business with it, where they (Kangan & Co.) have contributed so largely to its success. This 29½ acres, so conveyed, added to the 105 acres, and the 20-acre strip of land above mentioned, make 154½ acres altogether which the Belt Railroad and Stockyards Company now owns. In the organization of the Belt Railroad and Stockyards Company, W. Riley McKeen, Horace Scott, E. F. Claypool, W. C. Holmes, M. A. Downing and others were prominent, and after the organization of the same, W. R. McKeen, Horace Scott, M. A. Downing and E. F. Claypool were the active managers of the company. Mr. Claypool, as secretary and treasurer of the company, managed the financial operations of the company with great skill, and perhaps no one is more entitled to credit for carrying the company through and placing it upon a solid foundation than he.

"The struggle of the company began with the city credit of \$500,000. A petition was signed by a majority of all the citizens requesting that the loan be made, and even then the ordinance was duly passed by the Council by a bare majority of one. This shows how strong was the opposition against the measure. And, after this it was declared that the bonds issued by the Council were invalid, and that it was necessary to procure an act of Legislature to secure their validity; which was done by an act approved March 2, 1877 (acts of 1877, p. 116). Despite the opposition the measure passed both houses of the Legisla-

ture by a large majority. The greatest difficulties seemed to have been surmounted, and the work of construction was begun. The company continued the work until June 1, when it was interrupted, at a most inopportune time, in the midst of serious labor troubles and when work was almost impossible to be found; and when men were depressed and desperate. It seems that certain land-owners were not satisfied with the amount of money awarded them for the right of way, and a contest in court ensued. This threw many men out of employment, and a decision of the courts would probably delay the work for months. In the meantime people might starve and serious trouble result. Then it was that Mayor Caven worked night and day. Trouble had been brewing for a long time, and it culminated on the evening of June 6, 1877, when a large meeting of the unemployed was called at the Statehouse grounds. In the afternoon a compromise was effected by the mayor, and he gained permission to continue the work irrespective of the pending lawsuit. As soon as this point had been gained he sought Mr. Claypool, who was secretary of the company at the time; Mr. Reed, the engineer, and Mr. Richardson, who had charge of the men. They agreed to go on with the work in the morning if they were furnished with sufficient men, and Mr. Caven promised to meet this deficiency. When the labor meeting gathered that evening there were nearly five hundred desperate men assembled, needing but the tongue of an anarchist to drive them to any act of folly. It was a critical period, more serious than the citizens imagined. The township trustee could give no more aid, and municipal funds were at a low ebb. In the stormy speeches which followed the crowd was urged to commit bloodshed, if necessary, for they must have food. Finally, they decided to march to the Governor the next morning and make a last appeal; if this was useless they would loot the stores. In the midst of the scene Mayor Caven entered the room alone. It was an act of bravery, and with difficulty could he gain a hearing. When the uproar had ceased he told the people they could go to work tomorrow morning, and requested order and obedience. It was a scene to be remembered, this sudden transition from hopelessness to surety. Men laughed and cried, they shouted and sang, and it was a glorious moment to the man who stood among

them, alone, the man who had been true to his office and had saved the people. Then the mayor said no one should go to bed hungry that night, and asked the people to follow him and he would look after them. Out in the darkness and down the street the crowd followed their leader. Several bakeries were visited and each man was given several loaves of bread. Then they disappeared silently down the street and everything was quiet. It was the passing of a crisis.

"This is the story of the formation of the Belt Railroad and Stockyards Company and it is evident that Mayor Caven is the man who deserves very great credit for this work, which is an honor to himself and to the city. As to the results which arose from this undertaking, there is only one word which seems to fit the purpose—stupendous. Nothing has paid so well or been of so great value as a single enterprise. Starting with a stock of 30 cents on a dollar, each year saw a rise in the percentage. In 1879 and 1880 the cash dividends were 10 per cent. on the face of the stock and in 1881 stock sold for \$1.50. One of the earliest stockholders paid \$15,000 for \$50,000 stock and by 1899 had received \$10,000 in dividends; two years later he sold his stock for \$75,000 cash." * * *

BRIEF SKETCHES AND NOTES.

From various sources, among them a series of sketches of the Indianapolis railroads written by Mr. John H. Holliday and published in the *Indianapolis Sentinel* in 1869 (see dates May 22, July 24, August 2, August 5 and August 25), we gather these additional items of information:

The Indianapolis and Lawrenceburgh.—This road (afterward known as the I., C. & L.), as has been stated, antedated in its actual beginnings every other Indiana road, but it was not completed to Indianapolis until 1853. Its difficulties and the character and effects of the opposition to it on the part of the M. & I. road would make an interesting chapter of our early railroad history, but the data for it seem to be lost now. We find just enough evidence to show that there was much illegitimate opposition, which was made effective by the aid of the State. By the Lawrenceburgh newspaper files of 1835 we find that the L. & I. Company, that had secured the charter for the road in 1832,*

*Holloway's *Indianapolis* gives the date of the first railroad charters as February, 1831. A reference to the statutes would have shown the writer that it was 1832.

was still alive and active. On July 23 of that year ground was broken at Lawrenceburgh with the accompaniment of a barbecue and public demonstration (see *Palladium* for July 25). There were letters from Henry Clay, O. H. Smith and others, and many toasts. Major J. P. Dunn was prominent in the festivities. It is worthy of note that the *Rising Sun Times* of contemporary date and correspondents to its columns were hostile to the whole scheme of the road, their animosity, seemingly, arising from the idea that the State was going to subsidize it at the expense of other sections. Its final completion, affording a connection with Cincinnati, was a most important commercial benefit, and no other road, perhaps, conducted more to the decadence of the Madison route. The *Indianapolis Journal* for December 19, 1853, says: "The freighting business on this new route is exceeding the most sanguine predictions of its projectors. The receipts for freight alone have been more than one thousand dollars per day for some time past. One day this week ninety-five cars arrived at Lawrenceburgh full of freight. More cars are being built and every care taken to push forward freight without delay." The receipts of the road the first year were \$299,433.66, and the second year this was nearly doubled. In the tables of tonnage we find corn, wheat, oats, rye and barley, iron, coal, lumber, staves, hoopoles, stone, stock, flour, whisky, salt and pork.

The Jeffersonville Road.—If the Lawrenceburgh road swallowed up a large part of the business previously enjoyed by the M. & I., the Jeffersonville line took another part and did still worse, for it finally swallowed up the M. & I. itself. Before it accomplished that anaconda feat, however, it had to wage a long and determined fight. Its original charter, wherein it was designated as the Ohio & Indiana Railroad Company, dates back to 1832. In common with the other roads then chartered, this project lay dormant for a long time. In 1837 it was saved from total extinction by a renewal of its charter with certain amendments, and again in 1846 by another renewal. This last charter authorized a capital of \$1,000,000, divided into shares of \$100 each, \$100,000 of which must be subscribed before the company could be organized. The time limit was thirteen months. Nothing was consummated. In 1848 the projectors again got together

and secured a more liberal charter, extending the time limit to five years and giving authority to extend the line not merely to Columbus, as had been previously granted, but to any other point in the State that might be desired—which was a very important concession, as Indianapolis was the desired terminus. At this period the potential energy that had kept the thing breathing through these years showed signs of real life. The \$100,000 was raised, the company organized, with William C. Armstrong, of Jeffersonville, as president, and in October of 1848 twenty-two miles of the road was put under contract.* By August of 1852 the fifty-two miles between Jeffersonville and Rockford was completed and put in operation, and soon after it reached Columbus, where it met the M. & I., and the real conflict between the two roads began. Mr. John W. Ray, in a contribution to the Indiana Centennial Association, thus speaks of the relations between them at this point:

“John Brough was the president of the Madison & Indianapolis railroad. He was brainy and strong-willed, and equally so was Armstrong. When the Jeffersonville road was nearing Columbus, Armstrong was anxious to form connection with the other road, and arranged the time-tables to this end. Brough changed his, and when the Jeffersonville train hove in sight it was only to see the other departing.”

The sequel was that Armstrong simply headed for Indianapolis, building his road parallel with the M. & I., and only a few yards away. By the time he reached Edinburg the M. & I., presumably, concluded that a control of the rest of the route was better than a division of the same. At any rate a compromise was effected by the laying of a switch between the two tracks and the Jeffersonville traffic passed over it. By this time the M. & I. had passed its heyday, its stock was depreciating, and the astute rival road was quietly buying up the same. To quote Mr. Ray again: “When the next election of the board of directors was held, the Jeffersonville Railroad Company elected a majority of the board, and the Madison & Indianapolis railroad was shortly after consolidated into the Jeffersonville, Madison & Indianapolis Railroad Company, and William G. Armstrong became president thereof.” This consolidation took place in

*In 1849 the name was changed to the Jeffersonville Railroad Company.

1866. The J., M. & I. was a particularly important road during the Civil War, it being the route for conveyance of troops and supplies to the South. During that period its carrying capacity was taxed to the utmost.

The Bellefontaine & Indianapolis.—This road, afterward known as the C., C., C. & I., and now as the Big Four, was among the most important of the early lines, particularly as it was the first to give Indianapolis an outlet to the East and to deflect trade in that direction. Says Mr. Holliday, in the *Sentinel* articles we have cited: “It is impossible to estimate the advantage this road has been to Indianapolis. For several years a great deal of the stock of the Bellefontaine company was owned here, and the road was run directly in the interest of the city. * * * But the great benefit conferred by the road has been in the large amount of travel and business brought through here, and which has, in one way and another, done much to build up the city.” Its chief projector was Oliver H. Smith, who was its first president. Begun in 1848, it was by 1850 in operation as far as Pendleton, and was the second road running out of Indianapolis. Two years later it reached Union City, there making connection with an Ohio road and with points eastward. Prior to that it was a feeder to the Madison road, but afterward a formidable commercial rival.

The Peru & Indianapolis.—This road, the third that reached out from Indianapolis, was running to Noblesville by the spring of 1851 and reached Peru in 1854. Of it Mr. Holliday says: “Traversing, at first, a stretch of wilderness, and though a poorly constructed road with a history of repeated reverses, it yet helped materially to build up the country through which it ran. In its earlier days it brought into Indianapolis immense quantities of lumber, and, at a later day, much grain and produce.” The Madison road, in its various attempts at self-preservation, effected a consolidation with the Peru soon after the completion of the latter, on the theory that a through route from the Ohio river to the Wabash & Erie canal, and thence by water to Lake Erie and the East would put it on a footing with its victorious rivals; but the merger did not work smoothly, and dissolved before long.

The Terre Haute & Indianapolis.—The Terre Haute & Richmond, as it was originally called, the next Indianapolis road to go into operation, was intended, as the name implies, to cross the State and connect the two cities mentioned. The original idea, as said on a previous page, was to establish a link in a through route that should, without break, reach from St. Louis to Cincinnati. On May 12, 1847, a railroad convention was held at Indianapolis attended by delegates from various counties in this State and from Ohio and Illinois, the object being to stir up this scheme for a trunk line. In addition to the consideration of the road from Terre Haute to Richmond, steps were taken to urge action on the part of Ohio, and a committee was appointed to memorialize the Illinois legislature for the passage of an act granting right of way through that State. One fatal obstacle to the consummation of the plan at this time, it is claimed, was the indifference and lack of support over the route between Indianapolis and Richmond. At any rate, the actual project, so far as Indiana was concerned, settled down to the Terre Haute & Indianapolis road, a brief sketch of which has been furnished us by Mr. W. H. Ragan, now of Washington City. Says Mr. Ragan:

"The people of Terre Haute, headed by the late Chauncy Rose, desiring to be put in easier communication with the State capital, agitated the question of a railroad to Indianapolis, and a company was formed, with Chauncy Rose as its president, to construct this road. With this beginning, some Indianapolis men were approached, including the late E. J. Peck. The latter became deeply interested in the undertaking, and soon after was elected president of the company, which position he held for a number of years. These preliminaries occupied several years. The first officers of the company, as I recall them, were: President, Chauncy Rose; vice-president, E. J. Peck; chief engineer, Thomas A. Morris. The country lying between Terre Haute and Indianapolis was an almost unbroken wilderness, the settlements were separated by extensive and gloomy forests, and only a few villages were scattered along the line of the National Road. The railroad left this latter highway at Plainfield, from which point to Greencastle but a few settlements were to be found, and beyond that place for a number of miles conditions were even worse. The locating of the road was a slow and tedious process,

several surveys being made before the present line was finally established.

"Vice-President Peck, always faithful, never abandoned the corps of engineers. He accompanied them through their task, and when it was completed no one understood better than he just what obstacles were yet to be encountered and overcome. He had made the acquaintance of many residents along the line, fully understood each one's attitude toward the undertaking and knew whether he would grant the right of way through his possessions or obstruct to the bitter end, as many did, the building of the road. In this way he prepared himself for the troubles and litigation to follow. Then railroads could not make terms with property owners, as they can now, for right of way by condemnation proceedings. Concessions must be through compromise or by litigation. The latter was often resorted to and not infrequently an obstreperous land-owner forced the engineer, in order to avoid further difficulties, to deviate from his chosen line, by making a detour around the contested premises. In this way a road that should have been built as an air line, at least from Indianapolis to Greencastle, now has many annoying and dangerous curves in it. It was but natural for at least some of the farmers of that day to doubt the sincerity of the company in carrying out its undertaking. Some seemed to think the project too stupendous ever to be accomplished; others that the resources of the country were too limited to support such an undertaking."

The Terre Haute & Indianapolis was opened for through business in February of 1852. Its receipts for the first year were \$105,943.87, and within sixteen years its business multiplied ten times, its agricultural tonnage being swelled by an increasing carriage of coal. It is said to have been the first railroad in the State to issue bonds.

The Indiana Central.—The "Panhandle," as this road was subsequently called, now the P., C., C. & St. L., was the fulfilment of the old Terre Haute & Richmond idea, and followed it in such short time after the failure of the first company to push it through that the charge of indifference on the part of residents along the route could hardly have been true. It was begun in 1851 and completed in 1853, being the second to establish

(through Cincinnati) a connection with the East. It traversed one of the best sections of the State and was no small factor in developing that section, as well as Indianapolis.

Other Roads.—The Lafayette road, finished in 1852, was of especial service to Indianapolis as a connecting link between the Ohio river and Chicago. It was consolidated with the Cincinnati road in 1866. The "Junction" road, or C., H. & D., though begun in 1850, did not connect with Indianapolis till the latter sixties. The Vincennes road reached here about the same time, after a nominal existence of many years. This concludes the group of Indianapolis roads up to that date.

Names and Nicknames of Railroads.—Forty to sixty years ago there was something of a tendency to saddle railroads with sounding names that were grandiose, often, in proportion to the insignificance of the road. A writer in the *Indianapolis Press* for July 30, 1900, gives some of these samples of imposing verbiage. Some of the roads never existed except on paper. Such was the "Atlantic & Great Western," which was to run "all the way from Vincennes to Indianapolis," and the "American Central," which had a terminus in Ft. Wayne, and then, according to its articles of association, "wandered through the woods across the State and lost itself some place on the prairies of Illinois." The "Brazil, Bowling Green & Bloomfield, Northern & Southern Central Railway" was to be forty-six miles long, and the "Auburn & Eel River Valley" was to be twenty-four miles. A reversion to this verbal bolstering may be traced in the present "Chicago & Southeastern," which "does not go near Chicago and runs southwest." It was formerly known as the "Midland," and was famous among all the "jerk-water" roads of the State for its equipment and its ridiculous attempts to be a sure-enough railroad. In more recent times there has been a quite contrary tendency to brief nicknames, having usually some appropriate significance, and we have the "Big Four" (from the four big cities connected, Cleveland, Cincinnati, Chicago and St. Louis), the "Panhandle," the "Air Line," the "Clover Leaf," the "Nickel Plate," etc. The "Bee Line" of a generation ago, at first the Bellefontaine, was perhaps the first instance of this

kind of nomenclature. As an instance of facetious nicknaming, it is said that the Cambridge City branch of the J., M. & I., was once called the "Calico Road," because the workmen on it were paid in dry goods.

Early Railroad Equipment.—The first railroads in Indiana (except the first twenty-eight miles of the M. & I., which had imported "T" rails) were laid with "strap rails," which were simply bars of iron, about two and a half inches wide by five-eighths thick. These were spiked down to the wooden rails, as they were sometimes called, or continuous lines of oak stringers perhaps six inches square. Being secured near the inner edge of the stringers and the corner of the timber being chamfered off, the flanges of the wheels could not groove the wood. The stringers rested on cross-ties three or four feet apart, to which they were secured by strong wooden pins driven through auger-holes, and the ties, in turn, were supported by heavy timbers, or "mud-sills" which, laid end to end and bedded in the earth, afforded a foundation for the whole structure.* Other forms of construction were employed in some parts of the country, but, so far as we have been able to learn, the mode described was the only one in Indiana prior to the changes that came with improvements. The rolling stock was equally primitive. A locomotive, having at first neither cow-catcher nor cab,† weighed perhaps from ten to thirteen tons, as against the seventy-five or one hundred tons of to-day, and was capable of hauling twelve or fifteen cars holding three tons each. Twenty miles an hour for passenger trains was a high rate of speed. There is record, in 1840, of an engine drawing 221 tons forty miles in three hours and forty-one minutes. The development of the locomotive was retarded by the frail character of the tracks, as their weight crushed the yielding flat bar into the wood and loosened the spikes. The strain, moreover, very frequently caused the loosened rails to curl upward at the ends, threatening punctures and derailment, and these "snake-heads," as they were called, had to be constantly guarded against. A

*Query: Did the general use of "mud-sills" in railroad construction give rise to the colloquial term as applied to the man who belongs to the sub-stratum of society?

†The innovation of a protecting cab was at first objected to by the enginemen, as a dangerous trap in case of accident.

not uncommon occurrence was the stopping of trains till the trainmen went ahead with a sledge-hammer to spike down rails. There were other causes of delay not down on the schedules, among them being the stoppage at some wayside stream or pool to replenish the water supply by dipping up with leather buckets that were carried on hooks at the side of the tender. It is a plausible guess that from this job of the trainmen originated the humoristic appellation of "jerk-water," so commonly applied to cheap and out-of-date roads. It may be added that locomotives were once universally named as steamboats are to-day, the "General Morris," "Reuben Wells," "Dillard Rickets," etc., but illustrating the old custom of doing honor to men of note in the railroad world.

Railroad Mileage.—The railroad mileage in Indiana at various periods, according to the census reports of 1890, was: 1860, 2,163; 1870, 3,177; 1880, 4,373; 1886, 5,711.96; 1887, 5,798.94; 1888, 5,890.26; 1889, 6,003.76; 1890, 6,090.66. The census abstract for 1900 gives no statistics of steam railways.

In closing this we may add the following from a work on railways (Tuck's) issued in 1847: "In 1824 the first locomotive traveled at the rate of six miles per hour; in 1829 the 'Rocket' traveled at the rate of fifteen miles per hour; in 1834 the 'Firefly' attained the speed of twenty miles per hour; in 1839 the 'North Star' moved with a velocity of thirty-seven miles per hour, and at the present moment locomotives have attained the speed of seventy miles per hour." We have elsewhere seen it recorded that as early as 1850 trains had attained a speed of sixty miles an hour—a somewhat astonishing fact considering the crude form of the locomotive at that period. We have nowhere seen any statement as to such speed on Indiana roads, and, as said above, twenty miles per hour seems to have been regarded as a high rate of speed.

Errata and Omissions.—The date of the first work on the L. & I. railroad, given on page 152 should read 1834 instead of 1854. To the list of important lines mentioned on page 159 should be added the Ohio & Mississippi, which in 1857 became a completed

link in a continuous line that reached from Baltimore to St. Louis, "then the longest stretch of railroad track in the world." The completion of the three lines making this route—the Baltimore & Ohio, the Marietta & Cincinnati and the Ohio & Mississippi—was the occasion of a great railroad celebration. The first train over the road was a "Celebration Train," which was filled with railroad and government dignitaries and was greeted with much bunting and noise at all the towns along the way. The event was so notable as to call forth a good-sized illustrated book descriptive of the trip, which volume can be found in the State Library. Among the immediate influences of the railroads should be mentioned the first State fair, held at Indianapolis in 1852. The convenience of transportation afforded by them made possible something larger than the local fairs that had previously existed. The 1,365 entries in this fair came from all over the State, and some of them from other States, and they presented an industrial exhibit such as the westerners had never seen before and such as was hardly possible under the old systems of transportation.

GEO. S. COTTMAN.

FIRST CANAL SURVEYS.

SINCE our article on early canals (published in September issue), we have learned from a gazetteer of 1826 that at that early date a letter of instruction had been issued from the United States Engineering Department for the survey of four canal routes in the State of Indiana, as follows: 1. To unite the waters of Lake Michigan with the Wabash river, by the way of the St. Joseph river valley. 2. The uniting of the Wabash and White rivers by way of the Mississinewa or the "Pouceanpi-cheax" valley. 3. The uniting of the rivers at Ft. Wayne with the Ohio river by way of the Whitewater valley. 4. A canal "to turn the Falls of the Ohio near Jeffersonville." In accordance with these instructions, the engineers, says the gazetteer, "commenced their examinations on the Whitewater route on the 8th of July, 1826." Whether anything was ever done on surveys 1 and 2 we have not learned. The letter, as indicating a canal movement at that date, adds an item to the history of the subject.